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(54) **GLOVE**(71) Applicant: **TOWA CORPORATION CO., LTD.**,  
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See application file for complete search history.

## (56)

**References Cited**

## U.S. PATENT DOCUMENTS

2007/0204381 A1 \* 9/2007 Thompson ..... A41D 19/0065  
2/159

## FOREIGN PATENT DOCUMENTS

JP 07-119028 A1 5/1995  
JP 2000-096322 A1 4/2000

(Continued)

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(57) **ABSTRACT**

The present invention provides a glove having both high softness and high air tightness. A glove of the present invention has a fiber-made base having a shape of a hand of a person and a coating formed on a surface of at least a portion of the base, where a burning treatment is applied to the base, air tightness of a portion of the glove which has been applied with the burning treatment is maintained even when pressure of 9 kPa or higher is imparted to inside of the base, and the fiber-made base is formed of filament yarns.

**6 Claims, 9 Drawing Sheets**